

Material has been misidentified and distributed in some herbaria as "Labiatae". The Herb. Inst. Miguel Lillo 98621 collection, at least insofar as the United States National Herbarium specimen of it is concerned, is a mixture with a species of Marsypianthes.

Additional citations: CHILE: Tacna: Eyerdam 24646 (Ba). Tarapacá: Zöllner 3071 (Ac). ARGENTINA: Catamarca: Brizuela 540 (Ms--34199), 947 (N); A. Reales 823 (N), 978 (N); Villafañe 1119 (N). Córdoba: Gutiérrez 116 (Tu--77309). Mendoza: Lourteig 937 [Herb. Inst. M. Lillo 114104] (N); Villafañe 990 (Au--121515). Salta: Krapovickas & Cristóbal 20645 (Id); T. Meyer 3883 [Herb. Inst. Miguel Lillo 35686] (E--2655607). Santiago del Estero: Cuezzo 2337 (Au--121516); P. García 262 (N). MOUNTED CLIPPINGS: Miers, Trans. Linn. Soc. Lond. Bot. 27: 101. 1870 (W).

ADDITIONAL NOTES ON THE GENUS CORNUTIA. III

Harold N. Moldenke

CORNUTIA Plum. ex L., Sp. Pl., ed. 1, imp. 1, 2: 628. 1753; Gen. Pl., ed. 5, 276. 1754 [not Cornutia Burm. f., 1768].

Additional & emended synonymy: Cornuta Plum. ex L., Gen. Pl., ed. 6, 316. 1764. Cornvtia Scop., Introd. Hist. Nat. 170 & 179. 1777. Hosta Jacq., Hort. Schoenbr. 1: 60, pl. 114. 1797 [not Hosta Pfeiff., 1966, nor Tratt., 1814, nor Vell., 1874]. Cornutia [Plum. ex L.] L. apud Dalla Torre & Harms, Gen. Siphonog., imp. 1, 432. 1904.

Additional & emended bibliography: L., Crit. Bot. 92 & [280]. 1737; L., Gen. Pl., ed. 1, 24, 25, 366, [385], & [390]. 1737; L., Meth. Sex. Gen. Pl. 15, 92, & [280]. 1737; L., Gen. Pl., ed. 2, 303 & [535] (1742), ed. 3 ["2"], 233 & [419] (1743), and ed. 4, 233 & [448]. 1752; L., Sp. Pl., ed. 1, imp. 1, 2: 628. 1753; L., Gen. Pl., ed. 5, imp. 1, 276 & [501]. 1754; Adans., Fam. Pl. 2: 12, 196, & 199. 1763; L., Gen. Pl., ed. 6, 316 & [587]. 1764; [Retz.], Nom. Bot. 154 & [284]. 1772; Planer, Gatt. Pfl. 2: 557 & 1057. 1775; Scop., Introd. Hist. Nat. 170 & 179. 1777; Reichard in L., Gen. Pl., ed. 8, 318. 1778; J. F. Gmel. in L., Syst. Nat., ed. 13, imp. 1, 2: 890 & 946. 1789; Haenke in L., Gen. Pl., ed. 10 ["8"], 2: 554 & 794. 1791; Schreb. in L., Gen. Pl., ed. 9 ["8"], 2: 414-415 & 849. 1791; J. F. Gmel. in L., Syst. Nat., ed. 13, imp. 2, 2: 890 & 946. 1796; Raeusch., Nom. Bot., ed. 3, 173 & 383. 1797; Batsch, Tabl. Aff. Reg. Veg. 193. 1802; Desf., Tabl. Écol. Bot., ed. 1, 54. 1804; Willd., Enum. Pl. Hort. Berol. 2: 652. 1809; Desf., Tabl. Écol. Bot., ed. 2, 64. 1815; H.B.K., Nov. Gen. & Sp. Pl., ed. folio, 2: 200-201 (1817) and ed. quarto, 2: 247-248. 1818; Pers., Sp. Pl. 3: 358-359. 1819; J. E. Sm., Gramm. Bot. 98 & 223. 1821;

Endl., Gen. Pl. 635 & 638. 1838; Spach, Hist. Nat. Veg. Phan. 9: 227. 1840; Voigt, Hort. Suburb. Calc. 473. 1845; W. Griff., Notul. 4: 173. 1854; Schnitzlein, Icon. Fam. Nat. 2: 137. Verbenac. [2] & [3]. 1856; Ettinsh., Blatt-Skel. Dikot. pl. 32, fig. 8. 1861; Pfeiff., Nom. Bot. 1: 1671. 1874; Barnhart, Bull. Torrey Bot. Club 29: 590. 1902; Dalla Torre & Harms, Gen. Siphonog., imp. 1, 432. 1904; L., Sp. Pl., ed. 1, imp. 2 & 3, 2: 628. 1907; Solered., Syst. Anat. Dicot. Ergänz. 255. 1908; Goyena, Fl. Nicarag. 1: 568. 1911; E. D. Merr., Philip. Journ. Sci. 19: 376 & 377. 1921; Wangerin in Just, Bot. Jahressber. 53 (2): 645. 1925; Benoist, Arch. Bot. Caen 5, Mem. 1: 258. 1931; Stapf, Ind. Lond. 6: 479. 1931; Benoist, Bois Guyan. Franç. 258. 1933; L., Sp. Pl., ed. 1, imp. 4, 2: 628. 1934; Moldenke, Brittonia 1: 260 & 471. 1934; Fletcher, Kew Bull. Misc. Inf. 1938: 434. 1938; Moldenke, Prelim. Alph. List Invalid Names [1], 4, 10, 14, 23, 24, 27, & 28. 1940; Hill & Salisb., Ind. Kew. Suppl. 10: 61, 114, & 244. 1947; Metcalfe & Chalk, Anat. Dicot. 1035—1037 & 1041, fig. 248 G. 1950; Petalot, Pl. Méd. Cambod. Laos & Viet. 2 [Archiv, Recherch. Agron. & Past. Viet. 18]: 250. 1953; Anon., U. S. Dept. Agr. Bot. Subj. Index 15: 14356. 1958; Cuatrecasas, Revist. Acad. Colomb. Cienc. 10: 235. 1958; H. St. John, Nomencl. Pl. 123. 1958; L., Sp. Pl., ed. 1, imp. 5, 2: 628. 1959; L., Gen. Pl., ed. 5, imp. 2, [Cramer & Swann, Hist. Nat. Class. 3]: 276 & [501]. 1960; J. F. Macbr., Field Mus. Publ. Bot. 13 (5): 611, 690, & 713. 1960; Hartl, Beitr. Biol. Pfl. 37: 293. 1962; Dalla Torre & Harms, Gen. Siphonog., imp. 2, 432. 1963; Melchior in Engl., Syllab. Pflanzenfam., ed. 12, 2: 435. 1964; F. A. Barkley, List Ord. Fam. Anthoph. 76, 155, & 174. 1965; Airy Shaw in J. C. Willis, Dict. Flow. Pl., ed. 7, 285 & 557. 1966; Fosberg & Klawe in Bowman, Galápagos 188. 1966; Gómez Pompa, Estud. Bot. Reg. Misantla 93. 1966; Anon., Biol. Abstr. 48 (14): B.A.S.I.C. B.8. 1967; Dandy, Reg. Veg. 51: [Ind. Gen. Vasc. Pl.] 42, 121, & 122. 1967; Hocking, Excerpt. Bot. A.12: 425—426. 1967; J. Jiménez, Archiv. Bot. & Biogeogr. Ital. 43: 14. 1967; Moldenke, Phytologia 14: 420—429. 1967; Moldenke, Résumé Suppl. 15: 3, 15, & 20 (1967), 16: 4, 5, 20, 23, & 29 (1968), and 17: 8. 1968; Acosta-Solis, Divis. Fitogeogr. Ecuad. 63. 1968; Moldenke, Biol. Abstr. 49: 4199. 1968; Stearn, Humb. Bonpl. Kunth Trop. Am. Bot. 16. 1968; Uphof, Dict. Econ. Pl., ed. 2, 154 & 541. 1968; Anon., Torrey Bot. Club Ind. Am. Bot. Lit. 3: 306 & 308. 1969; Dandy, Taxon 18: 469. 1969; Moldenke, Phytologia 18: 505. 1969; Gibson, Fieldiana Bot. 24 (9): 179 & 195—198, fig. 37. 1970; Soukup, Raymondiana 3: 26 & 49. 1970; Angely, Fl. Anal. & Fitogeogr. Est. S. Paulo, ed. 1, 4: 826. 1971; Balgooy, Blumea Suppl. 6: [Pl. Geogr. Pacif.] 200. 1971; Farnsworth, Pharmacog. Titles 6 (9): iii. 1971; Moldenke, Fifth Summ. 1: 5, 69, 79, 81, 83—85, 87, 89, 90, 92, 95, 100, 102, 105, 108, 110, 111, 116, 122, 123, 132, 133, 135, 140, 148, 361, 362, 378, 385, 420, & 469—471 (1971) and 2: 528—531, 533, 727, 758, 787, 875, & 876. 1971; Sáez R. & Nasser C., Revist. Biol. Trop. 18: 137. 1971; Moldenke, Phytologia 21: 102, 387, & 505 (1971), 22: 282 (1971), and 23: 319, 415, 430, 454, & 505. 1972;

C. D. Adams, Flow. Pl. Jam. 627, 636, & 811. 1972; Airy Shaw in J. C. Willis, Dict. Flow. Pl., ed. 8, 293 & 571. 1973; Altschul, Drugs & Foods 245—246 & 351. 1973; Anon., Biol. Abstr. 56 (3): B.A.S.I.C. S.59. 1973; López-Palacios, Pittiera 5: 18. 1973; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 9 (13): 18. 1973; Moldenke, Biol. Abstr. 56: 1243. 1973; Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 43, 125–130, & 145, fig. 13. 1973; Moldenke, Phytologia 25: 227, 238, & 505 (1973), 26: 502 (1973), 27: 507 (1974), and 28: 432, 435, 449, & 508. 1974; Hocking, Excerpt. Bot. A, 23: 291. 1974; H. R., Biol. Abstr. 57: 1904. 1974; Lasser, Braun, & Steyermark, Act. Bot. Venez. 9: 36. 1974; León & Alain, Fl. Cuba, imp. 2, 2: 280 & 313—314, fig. 135. 1974; Little, Woodbury, & Wadsworth, Trees P. R. & Virg. Isl. 2 [U. S. Dept. Agr. Agric. Handb. 449]: xii, 854, 862, 863, 993—995, 997, 1001, 1004, 1007, 1012, 1014—1016, 1020, & 1023, fig. 682. 1974; Molina R., Ceiba 18: 66. 1974; J. F. Morton, 500 Pl. S. Fla. 63. 1974; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 15: 24 & 96. 1975; Moldenke, Phytologia 31: 239 & 378. 1975; Molina R., Ceiba 19: 95. 1975.

It should be noted that Cornutia Burm. and Cornutia Burm. f. are synonyms of Premna L., while Hosta Pfeiff., and Hosta Vell. are synonyms of Clavija Ruiz & Pav. in the Theophrastaceae (Myrsinaceae) and Hosta Tratt. is a valid conserved genus in the Convallariaceae. While Airy Shaw (1966) credits one of the Hosta homonyms to Pfeiffer, consultation of Pfeiffer's work (1874) shows that Pfeiffer plainly credits the name to Velloso's "Flora Fluminensis".

It is also worth recording here that the H.B.K. reference dates given in the above bibliography have been authenticated by Barnhart (1902). The Endlicher (1838) reference cited above is often cited as "1836–1856", but the pages involved here were actually issued in 1838. The Angely (1971) reference is sometimes cited as "1970", the title-page date, but the volume involved was not actually published until 1971.

Dalla Torre & Harms (1904) assert that the genus Cornutia comprised 4 or 5 species from tropical America only, while León & Alain (1974) raise the estimate to about 11. I recognize 26 valid taxa, 12 of which are of specific rank.

Macbride (1960) informs us that "Plumier's name [for the genus] (as decreed by modern savants, validated by Linnaeus) records the botanical observations of an early seventeenth century Canadian physician, Jacques Philippe Cornut" — actually Cornut was a French physician who traveled in Canada and wrote on Canadian plants.

CORNUTIA AUSTRALIS Moldenke in Fedde, Repert. Spec. Nov. 40: 171—172. 1936.

Additional bibliography: Moldenke, Phytologia 7: 381. 1961; Moldenke, Fifth Summ. 1: 148 (1971) and 2: 875. 1971.

CORNUTIA AUSTRALIS var. **OCCIDENTALIS** Moldenke, Castanea 10: 45. 1945.

Additional bibliography: Moldenke, *Phytologia* 7: 381. 1961; Moldenke, Fifth Summ. 1: 135 (1971) and 2: 875. 1971.

CORNUTIA COERULEA (Jacq.) Moldenke in Fedde, *Repert. Spec. Nov. 40*: 189—190. 1936.

Additional & emended synonymy: Cornutia pyramidata Ait., Hort. Kew. 2: 353. 1789 [not C. pyramidata L., 1753, nor León, 1953, nor Spreng., 1825, nor Willd., 1821]. Hostana caerulea Jacq. ex Pers., Sp. Pl. 3: 358—359. 1819.

Additional bibliography: Desf., *Tabl. Écol. Bot.*, ed. 1, 54. 1804; Willd., *Enum. Pl. Hort. Berol.* 2: 652. 1809; Desf., *Tabl. Écol. Bot.*, ed. 2, 64. 1815; Pers., *Sp. Pl.* 3: 358—359. 1819; Spreng. in L., *Syst. Veg.*, ed. 16, 1: 39. 1825; Voigt, *Hort. Suburb. Calc.* 473. 1845; Anon., *Biol. Abstr.* 48 (14): B.A.S.I.C. B.8. 1967; Hocking, *Excerpt. Bot.* A.12: 426. 1967; Moldenke, *Phytologia* 14: 421. 1967; Moldenke, *Biol. Abstr.* 49: 4199. 1968; Moldenke, *Résumé Suppl.* 16: 23. 1968; Moldenke, Fifth Summ. 1: 100, 361, & 470 (1971) and 2: 528, 529, 531, & 875. 1971; A. L. Moldenke, *Phytologia* 23: 319. 1972.

An unidentified editor of "Biological Abstracts" (1967) indexes a paper on Hosta caerulea Tratt. under Verbenaceae even though the abstract itself definitely states that it refers to the "liliaceous" genus Hosta!

Desfontaines (1815) reduces Hosta caerulea Jacq. to the synonymy of Cornutia pyramidata L., while Steudel (1821) does the very opposite: he reduced C. pyramidata L. to the synonymy of C. caerulea. Actually, it is C. pyramidata Ait. which is conspecific with and a synonym of C. caerulea.

CORNUTIA GRANDIFOLIA (Schlecht. & Cham.) Schau. in A.DC., *Prodr.* 11: 682. 1847.

Additional synonymy: Hosta grandifolia Schlecht. ex Benth., *Bot. Voy. Sulphur* 154. 1846. Cornutia grandiflora Schau. ex Moldenke, *Prelim. Alph. List Invalid Names* 23, in syn. 1940; J. F. Morton, 500 Pl. S. Fla. 63. 1974. Cornutia grandifolia (C. & S.) Lehauer ex Fosberg & Klawe in Bowman, *Galáp.* 188. 1966. Cornutia grandis Moldenke, Fifth Summ. 1: 470, in syn. 1971. Cornutia grandiflora (Schlecht. & Cham.) Schau. ex Moldenke, *Phytologia* 26: 372, in syn. 1973. Cornutia grandiflora (Sw.) Schaw ex Moldenke, *Phytologia* 26: 372, in syn. 1973.

Additional bibliography: Metcalfe & Chalk, *Anat. Dicot.* 1036 & 1037, fig. 248 G. 1950; Fosberg & Klawe in Bowman, *Galáp.* 188. 1966; Gómez Pampa, *Estud. Bot. Masantla* 93. 1966; Moldenke, *Résumé Suppl.* 15: 3, 15, & 20 (1967) and 16: 4 & 20. 1968; Moldenke, *Phytologia* 14: 420—424 & 426. 1967; Gibson, *Fieldiana Bot.* 24 (9): 196—198, fig. 37. 1970; Farnsworth, *Pharmacog. Titles* 6 (9): iii. 1971; Moldenke, Fifth Summ. 1: 69, 79, 81, 83—85, 87, 90, 92, 361, 362, 407, 470, & 471 (1971) and 2: 529—531 & 875—876. 1971; Sáez R. & Nasser C., *Revist. Biol. Trop.* 18: 137. 1971; Moldenke, *Phytologia* 21: 102, 387, & 449 (1971) and 23: 415. 1972;

Altschul, Drugs & Foods 245. 1973; Farnsworth, Pharmacog. Titles 6, Cum. Gen. Ind. [35]. 1973; Moldenke, Phytologia 25: 227. 1973; Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 126-129 & 145. 1973; J. F. Morton, 500 Pl. S. Fla. 63. 1974; Molina R., Ceiba 19: 95. 1975.

Additional illustrations: Gibson, Fieldiana Bot. 24 (9): 197, fig. 37. 1970.

Recent collectors describe this plant as a bushy, regular, secondary tree, 3-16.5 m. tall, or a shrub, 2-5 m. tall, the base of the trunk to 45 cm. in diameter, divided near the base into 2 trunks 5-25 cm. in diameter at breast height; bark rugose and cork-like, cream-gray to pale-brown; branches square when young; leaves with a brownish aspect, soft-velvety; petioles tinged violet; flower-buds purple or dark-violet; flowers fragrant, in dense terminal panicles; fruit dark-purple or purple-violet to violet-purple or blackish-blue. A wood sample accompanies Stork 4526.

Collectors have encountered this plant in black sandy soil or the deep sand of acahual in primary vegetation, in forests, high forests, rainforests, cloud forests, and mixed forests, on hill-sides and forested rocky hills, on steep heavily wooded slopes with Pinus and Quercus, on north-facing hillslopes, in moist thickets at the edge of forests, in secondary vegetation of high evergreen woods, on lakeshores and in poorly drained soil by lakes, in riparian vegetation and unoccupied clearings, and in areas of half-shade with sun part of each day, at altitudes of 80-2150 meters ("more common at 4000-5000 feet"), flowering from March to November, and fruiting in June and from August to November. Andrew & Alison Moldenke describe it as "a small tree escaped in hedgerows, with magenta fruit". Gómez Pompa reports it growing in association with members of the Lauraceae. In Costa Rica it sometimes grows as a fence tree bordering coffee plantations. A pollen slide has been made from P. H. Allen 1637 by W. H. Lewis and is deposited in the Palynological Laboratory of Washington University and at the Missouri Botanical Garden.

Martínez Calderón refers to the species as "scarce" in Veracruz, Mexico, while Rosas R. describes it as a "regularly abundant tree" there. Yuncker (1940) describes it as a "Small tree about 2.5 meters tall, the branches strongly 4-angled. Leaves densely hairy; flowers violet. In thickets on the foothills." The cultivated plants in Florida, cited below, were raised there from Mexican seed.

Additional vernacular names reported for this plant are "lengua de vaca", "murciélagos", and "pavilla".

The corollas are said to have been "blue" on P. H. Allen 1637, Breedlove 14927, Buden 69, Contreras 7807, Cruz C. 238, Dwyer, Durkee, Croat, & Castillon 4571, Molina R. 20562 & 22950, and Tyson, Fosberg, & al. 3973, "light-blue" on Gentle 7968, "purple-blue" on Bunting & Licht 977, "purple" on P. H. Allen 1795, A. Jiménez M. 4007, Martínez-Calderón 1723, Rosas R. 1343, Stork

4526, and Williams, Molina R., & Williams 23440, "dark-purple" on Stork 3009, "lilac" on Beaman 6041 & 6168, "violet" on Contreras 8852 and A. Jiménez M. 3980, "dark-violet" on Stork 4113, "lavender-violet" on Hunter & Allen 537, "blue-violet" on Contreras 4728, and "reddish-violet" on Rodríguez 427.

Gibson (1970) reduces var. purpusi Moldenke and var. quadrangularis Ørst. & Moldenke to synonymy under typical C. grandifolia. Standley (1924) separates C. grandifolia from the Central American and Mexican form of C. pyramidata as follows:

"Corolla minutely glandular-puberulent, the tube 2 mm. thick or less C. pyramidata

Corolla villosulous, the tube about 3 mm. thick . C. grandifolia"

Material of typical C. grandifolia has been misidentified and distributed in some herbaria as var. intermedia Moldenke, var. quadrangularis Ørst. & Moldenke, and var. normalis (Kuntze) Moldenke [which, in spite of its misleading epithet, is not the typical form of C. grandifolia], C. lilacina Moldenke, and even Aegiphila sp. The Hunter & Allen 537, cited below, was previously cited by me as var. intermedia, but I now feel that it is better regarded as representing the typical form of the species.

On the other hand, the Almeda 321, C. W. Dodge 10723, Jiménez M. 1741, Lent 871, Molina R., Williams, Burger, & Wallenta 17627, Terry & Terry 1379, Ton 2544, Tyson 1266, Tyson & Lazor 5430, Ventura A. 4517, Wedel 2173, and Williams, Molina R., Williams, & Gibson 28871, distributed as typical grandifolia, are actually var. intermedia Moldenke, Correa A. & Stimson 19, Croat 14910, J. A. Duke 5680, Ebinger 485, Jiménez M. 3463, Liesner 847, L. A. M. Riley 120, and Tyson 1274 are var. normalis (Kuntze) Moldenke, Ton 3070 is C. latifolia (H.B.K.) Moldenke, J. D. Dickson 1316 is C. lilacina Moldenke, and Gillis 8464, Pancho 1704, and R. W. Read 1260 are C. lilacina var. velutina Moldenke, and Tyson 2033 is something in the Rubiaceae.

Additional citations: MEXICO: Chiapas: Breedlove 14927 (W—2544608); O. F. Clarke 306 (N, Ws); Ton 2492 (N). Oaxaca: Chavellás P. & Pérez J. 230 (Ip); Liebmamn 11306 (Ba). VERACRUZ: Beaman 6041 (Ac), 6168 (Ac); Martínez-Crovetto 1723 [Rec. Inf. D002164] (Mi), 2047 [Rec. Inf. D003945] (Mi); Cruz C. 238 (Ip); Moldenke & Moldenke 2229 (Ac, Z—photo, Z—photo); Rosas R. 1343 (Ac, Mi); Sousa 2748 (W—2634501). GUATEMALA: Alta Verapaz: Contreras 4728 (Au—278579, Ld), 7807 (Au—278864, Ld, W—2558745). El Petén: Contreras 2437 (Au—228044), 8852 (Ld, Ld); C. L. Lundell 16450 (Au—228038); Ortíz 1318 (N). BRITISH HONDURAS: Gentle 7968 (Au—224426, Mi). NICARAGUA: Matagalpa: Bunting & Licht 977 (N, W—2542894); Molina R. 20562 (N), 22950 (N); Williams, Molina R., & Williams 23440 (N). COSTA RICA: Alajuela: A. Jiménez M.

3980 (N), 4007 (N); Stork 4113 [A. F. Smith 13] (N). Cartago: Rodriguez 427 (Tu-132385); Stork 4526 (N); Taylor & Taylor 11465 (N). San José: R. K. Godfrey 67212 (E-1820857); Stork 3009 (N). PANAMA: Coclé: P. H. Allen 1637 (E-1189564), 1795 (E-1189409); Dwyer, Durkee, Croat, & Castillon 4571 (E-1983556); Hunter & Allen 537 (W-1976138); Kirkbride 1073 (E-1982891); Tyson, Fosberg, & al. 3973 (N, W-2730249). CULTIVATED: Florida: Buden 69 (Ws).

CORNUTIA GRANDIFOLIA var. INTERMEDIA Moldenke in Fedde, Repert. Spec. Nov. 40: 167-168. 1936.

Additional bibliography: Moldenke, Phytologia 14: 423. 1967; Moldenke, Résumé Suppl. 15: 3 (1967) and 16: 4. 1968; Gibson, Fieldiana Bot. 24 (9): 196 & 198. 1970; Moldenke, Fifth Summ. 1: 79, 83, 85, 87, 90, & 362 (1971) and 2: 876. 1971; Moldenke, Phytologia 25: 227. 1973; Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 126, 127, & 145. 1973.

Recent collectors describe this plant as a large shrub or tree, 1.5-8 m. tall, the trunk or stems 2.5-15 cm. in diameter at breast height, the leaves villous, the flowers with the scent of lavender (Lavendula), and the fruit blue-purple, lilac, or "flushed lilac". They have encountered it along roadsides, on riverbanks and beaches, in roadside thickets, cloud forests, rainforests, and remnant montane rainforests, along streams and rivers, in secondary forests, in dense partially disturbed forests with Inga, Quercus, and Orchidaceae, and on steep heavily wooded slopes with Taxodium, Erythrina, Piper, and Liquidambar, at altitudes of 16-2165 meters, flowering from December to August, fruiting in February, June, July, and November. The vernacular name, "musciallago" [meaning "bats"], is recorded. Ventura A. refers to it as "very rare" in Veraceuz, Mexico. Jiménez M. found it "en borde de bosque con ramas arqueadas. El par apical de hojitas de cada rama no florecida tiene color púrpurea. Ramas recién cortadas huelen a Lippia dulcis [=Phyla scaberrima (A. L. Juss.) Moldenke]. Usado muy a menudo como poste vivo en cercas" in Alajuela, Costa Rica.

The corollas are said to have been "blue" on Dwyer & Kirkbride 7426 and Terry & Terry 1379, "dark-blue" on Lent 871, "violet" on Almeda 321 and Wedel 2173, "violet-rose" on A. Jiménez M. 1741 & 1742, "lavender" on Lewis, Escobar, MacBryde, Oliver, & Ridgway 2016, Ton 2544, and Tyson & Lazor 5430, "lilac" on Roe, Röe, & Mori 790, and "purple" on Blackwell, Correa A., & Ridgway 2757, Jiménez M. 1635, Lewis, MacBryde, Oliver, & Ridgway 1746, Molina R., Williams, Burger, & Wallenta 17627, and Williams, Molina R., Williams, & Gibson 28871.

Gibson (1970) reduces this taxon to the synonymy of C. pyramidalis L., but with this disposition I cannot agree.

Material of C. grandifolia var. intermedia has been misidentified and distributed in some herbaria as typical C. grandifolia

(Schlecht. & Cham.) Schau., C. grandifolia var. normalis (Kuntze). Moldenke, and even "Labiatae". On the other hand, the Hunter & Allen 537, previously cited by me as var. intermedia, is now regarded by me as better placed in typical C. grandifolia.

Additional citations: MEXICO: Chiapas: Ton 2544 (Ws). Vera-cruz: Ventura A. 4517 (Mi, Tu--186247). GUATEMALA: Sacatepéquez: Roe, Roe, & Mori 790 (Ld). NICARAGUA: Río San Juan: S. B. Robbins 6178 (Ld). COSTA RICA: Alajuela: Almeda 321 (Mi); A. Jiménez M. 1741 (N, W--2566502, Ws, Ws); Molina R., Williams, Burger, & Wallenta 17627 (N); Williams, Molina R., Williams, & Gibson 28871 (W--2537723, Ws). Cartago: Jiménez M. 1635 (N, W--2751898, Ws, Ws); Lent 871 (N, W--2542459). PANAMA: Bocas del Toro: Blackwell, Correa A., & Ridgway 2757 (Ld); Lewis, Escobar, MacBryde, Oliver, & Ridgway 2016 (E--1887600, W--2545847); Wedel 2173 (E--1232421). Canal Zone: Tyson 1266 (E--1812245); Tyson & Lazor 5430 (E--1979896). Coclé: Lewis, MacBryde, Oliver, & Ridgway 1746 (E--1887606, W--2545866). Darién: Terry & Terry 1379 (E--1196288). Panamá: C. W. Dodge 10723 (E--1294411). Veraguas: Dwyer & Kirkbride 7426 (E--1894005, W--2545875).

CORNUTIA GRANDIFOLIA var. NORMALIS (Kuntze) Moldenke in Fedde, Repert. Spec. Nov. 40: 170--171. 1936.

Additional synonymy: Cornutia grandifolia var. normalis Moldenke, Résumé Suppl. 16: 20, in syn. 1968. Cornutia grandis var. normalis Moldenke, Résumé Suppl. 18: 9, in syn. 1969.

Additional bibliography: Moldenke, Phytologia 14: 423--424. 1967; Moldenke, Résumé Suppl. 15: 15 (1967) and 16: 4 & 20. 1968; Moldenke, Fifth Summ. 1: 87, 90, 92, 362, & 470 (1971) and 2: 876. 1971; Altschul, Drugs & Foods 245. 1973; Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 126--129 & 145, fig. 13. 1973.

Illustrations: Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 128, fig. 13. 1973.

Recent collectors describe this plant as a bush or shrub, 2--3.5 m. tall, or a small tree, 4--10 m. tall, fragrant, the stems square, 2.5--15 cm. in diameter at breast height, the foliage fragrant with a minty odor, the flowers also with a minty odor, and the fruit green to purple. They have found it growing at 25 to 1200 meters altitude, flowering from April to October, and fruiting in October. It has been encountered on savannas and wet savannas, along roadsides in savannas, at the edges of forests, on forested riverbanks, in thickets on hillsides, in cutover secondgrowth, pastures, and gallery forests, and along roadsides, often growing in the direct sun. According to Stern and his associates the "crushed leaves have a rank aroma of mint". Altschul (1973) cites Stern & al. 56 and Wedel 2173. The vernacular name, "musciallago" [meaning "bats"], is recorded for this plant.

The corollas are said to have been "lavender" on Dwyer 1073 and on Lewis, MacBryde, Oliver, & Ridgway 1620, "pale-blue" on Woodson, Allen, & Seibert 412, "blue" on P. H. Allen 5034, Croat 14910, Duke 12364 & 12446, Ebinger 485, Jiménez M. 3464, Kuntze 1332, L. A. M. Riley 120, Woodson, Allen, & Seibert 758 & 1737, and Woodson & Schery 1002, "blue-violet" on Liesner 847, and "purple" on Correa A. & Stimson 19, Porter, Crosby, & Baker 5152, and Tyson 1260, 1274, & 1874a.

Material has been misidentified and distributed in some herbaria as typical *C. grandifolia* (Schlecht. & Cham.) Schau., *C. "grandiflora* (S. & C.) Schau.", and *C. pyramidalis* L. On the other hand, the P. H. Allen 1637 & 1795, distributed as this variety, are actually typical *C. grandifolia* (Schlecht. & Cham.) Schau., Blackwell, Correa A., & Ridgway 2757, Dwyer & Kirkbride 7426, Lewis, Escobar, MacBryde, Oliver, & Ridgway 2016, and Lewis, MacBryde, Oliver, & Ridgway 1746 are var. *intermedia* Moldenke, and Duke 14454 is *C. microcalycina* var. *pulverulenta* Moldenke.

Additional citations: COSTA RICA: Puntarenas: Jiménez M. 3464 (N). PANAMA: Canal Zone: Correa A. & Stimson 19 (E-1897432, M1, N, W-2640353); Croat 14910 (N); Dwyer 1073 (E-1810409, W-2511394); Ebinger 485 (E-1822489); Stern, Chambers, Dwyer, & Ebinger 56 (E-1757557); Tyson 1060 (E-1813010), 1260 (E-1817317), 1274 (E-1812259), 1874a (E-1817313). Chiriquí: Dwyer & Kirkbride 7462 (E-1894007, Oh, W-2545709); Woodson, Allen, & Seibert 412 (E-1170528). Coclé: Woodson, Allen, & Seibert 1737 (E-1170860). Los Santos: Duke 12446 (E-1908629); Lewis, MacBryde, Oliver, & Ridgway 1620 (N). Panamá: Duke 5680 (E-1814165); Porter, Crosby, & Baker 5152 (Ld); Woodson, Allen, & Seibert 758 (E-1170413); Woodson & Schery 1002 (E-1205057). Veraguas: Duke 12364 (E-1908621); Liesner 847 (W-2745304). Province undetermined: L. A. M. Riley 120 (E-1636525).

CORNUTIA GRANDIFOLIA var. PURPUSI Moldenke in Fedde, Repert. Spec. Nov. 40: 169. 1936.

Emended synonymy: *Hosta longifolia* H.B.K., Nov. Gen. & Sp. Pl., ed. folio, 2: 201. 1817.

Additional & emended bibliography: H.B.K., Nov. Gen. & Sp. Pl., ed. folio, 2: 201 (1817) and ed. quarto, 2: 247. 1818; Barnhart, Bull. Torrey Bot. Club 29: 590. 1902; Moldenke, Phytologia 14: 421, 422, & 424. 1967; Gibson, Fieldiana Bot. 24 (9): 196. 1970; Moldenke, Fifth Summ. 1: 69 & 470 (1971) and 2: 530 & 876. 1971.

It should be noted here that the H.B.K. reference dates given above have been verified by Barnhart (1902).

Gibson (1970) reduces this taxon to the synonymy of typical *C. grandifolia* (Schlecht. & Cham.) Schau. Material has been misidentified and distributed in some herbaria as *Aegiphila* sp.

Additional citations: LOCALITY OF COLLECTION UNDETERMINED:
Fournier s.n. [acquis en Janvier 1885] (P, P, P, P, P, P); Herb.
Mus. Paris s.n. (P).

CORNUTIA GRANDIFOLIA var. QUADRANGULARIS Ørst. & Moldenke ex Moldenke in Fedde, Repert. Spec. Nov. 40: 168. 1936.

Additional synonymy: Cornutia grandifolia var. quadrangularis Moldenke ex Gibson, Fieldiana Bot. 24 (9): 196. 1970.

Additional bibliography: Moldenke, Phytologia 14: 422 & 424. 1967; Gibson, Fieldiana Bot. 24 (9): 196. 1970; Moldenke, Fifth Summ. 1: 87, 470, & 471 (1971) and 2: 876. 1971; Moldenke, Phytologia 32: 237. 1975.

Gibson (1970) reduces this taxon to synonymy under typical C. grandifolia (Schlecht. & Cham.) Schau. The Rodriguez 427, distributed as this variety, actually is typical C. grandifolia and it is possible that the variety should be reduced to form rank.

CORNUTIA GRANDIFOLIA var. STORKII Moldenke in Fedde, Repert.

Spec. Nov. 40: 169—170. 1936.

Additional bibliography: Moldenke, Phytologia 14: 424. 1967; Gibson, Fieldiana Bot. 24 (9): 196. 1970; Moldenke, Fifth Summ. 1: 87 (1971) and 2: 876. 1971.

Gibson (1970) reduces this taxon to synonymy under typical C. grandifolia (Schlecht. & Cham.) Schau. and it is, indeed, possible that form rank is all it deserves.

CORNUTIA JAMAICENSIS Moldenke in Fedde, Repert. Spec. Nov. 40: 191—193. 1936.

Additional bibliography: Moldenke, Phytologia 14: 424 & 429. 1967; Moldenke, Fifth Summ. 1: 100 (1971) and 2: 876. 1971.

CORNUTIA LATIFOLIA (H.B.K.) Moldenke in Fedde, Repert. Spec. Nov. 40: 179—181. 1936.

Emended synonymy: Hosta latifolia H.B.K., Nov. Gen. & Sp. Pl., ed. folio, 2: 201. 1817 [not H. latifolia (Miq.) Matsum., 1905]. Cornutia pyramidata Spreng. in L., Syst. Veg., ed. 16, 1: 39. 1825 [not C. pyramidata Ait., 1789, nor L., 1753, nor León, 1953, nor Willd., 1821].

Additional & emended bibliography: H.B.K., Nov. Gen. & Sp. Pl., ed. folio, 2: 201 (1817) and ed. quarto, 2: 248. 1818; Barnhart, Bull. Torrey Bot. Club 29: 590. 1902; Moldenke, Phytologia 14: 424—425 & 428. 1967; Gibson, Fieldiana Bot. 24 (9): 196 & 198. 1970; Moldenke, Fifth Summ. 1: 69, 79, 81, 362, & 470 (1971) and 2: 530 & 876. 1971; Moldenke, Phytologia 32: 237. 1975.

Recent collectors describe this plant as an arborescent shrub, 1—6.5 m. tall, with an unpleasant fetid odor, the trunk 3—12 cm. in diameter at breast height, the stems square, glaucous, the older portions becoming corky, gray, panicles 2.5 x 7 dm., and stamens 2. They have encountered it in low forests, clearings, on slopes with Liquidambar and Erythrina, and in grazed thorn-

scrub forest with Acacia dominant, at an altitude of 1000 meters, flowering in May and from August to October, and fruiting in September. Andrew & Alison Moldenke describe the inflorescences as blue. The corollas are said to have been "blue" on Ortiz 1095, "bluish" on Contreras 6041, "lavender" on Ton 3070, "lavender-blue" on Gilly & Hernandez X. 109, and "light-purple" on Roe, Roe, & Mori 1334, while Sorenson reports the "petals dusty-blue with yellow spot in throat". The vernacular name, "expangage", is recorded for it. Sorenson also reports that "pollination or visitation [is] made by [a] large black butterfly with [a] scarlet jagged band across [the] base of [the] wings".

Gibson (1970) reduces this taxon to the synonymy of her all-inclusive C. pyramidalis L. and the two taxa are certainly very closely related. Cytologic studies will have to reveal exactly how close the relationship is. Material has been misidentified and distributed in some herbaria as C. grandifolia (Schlecht. & Cham.) Schau., C. pyramidalis L., C. pyramidalis var. isthmica Moldenke, C. pyramidalis var. ismithia Moldenke, and even as Labiatae sp. On the other hand, the Gentle 16, Lundell & Lundell 7888, and Matuda 3398, distributed and previously cited by me as C. latifolia, seem actually better placed as C. pyramidalis var. isthmica Moldenke.

It should be noted that the revised H.B.K. reference dates given above have been verified by the work of Barnhart (1902).

Additional citations: MEXICO: Chiapas: Ton 3070 (N). Tabasco: Gilly & Hernandez Xolocotzi 109 (Au). Veracruz: Moldenke & Moldenke 2235 (Ac). Yucatán: Enriquez 68 (W-2597486); Roe, Roe, & Mori 1334 (Ld). GUATEMALA: El Petén: Contreras 6041 (Au-278542, W-2558711); Ortiz 1095 (N), 1330 (N). BRITISH HONDURAS: C. L. Lundell 433 (N); Sorenson 7067 (W-2624964).

CORNUTIA LATIFOLIA f. ALBA Moldenke, Phytologia 2: 131. 1948.

Additional bibliography: Moldenke, Phytologia 14: 425. 1967; Gibson, Fieldiana Bot. 24 (9): 196 & 198. 1970; Moldenke, Fifth Summ. 1: 69 (1971) and 2: 876. 1971.

Chavelas and his associates describe this plant as a rare shrub, 2 m. tall, growing in acahuales and pastizales of Panicum maximum, Apeiba tiborbou, Cochlospermum vitifolium, Spondias mombin, Scheelea liebmanni, and Guazuma ulmifolia in deep well-drained soil, flowering in November. They record the vernacular name, "hoha de lara", and distributed their material as typical C. latifolia (H.B.K.) Moldenke.

Additional citations: MEXICO: Veracruz: Chavelas, Esparza, & Aceves ES.2406 (Ip).

CORNUTIA LILACINA Moldenke in Fedde, Repert. Spec. Nov. 40: 181-183. 1936.

Additional bibliography: Moldenke, Phytologia 14: 422 & 425.

1967; Gibson, Fieldiana Bot. 24 (9): 196. 1970; Moldenke, Fifth Summ. 1: 79, 83, 84, & 470 (1971) and 2: 876. 1971; Moldenke, Phytologia 28: 432 (1974), 31: 378 (1975), and 32: 237. 1975.

Recent collectors describe this as a "regular" shrub, 4 m. tall, with purple fruit, and have found it growing in moist and roadside thickets, at 900 m. altitude, flowering in June, and fruiting in September. The corollas are said to have been "violet" in color on Molina R. 83. Gibson (1970) reduces the taxon to synonymy under C. pyramidata L., a West Indian plant.

Material has been misidentified and distributed in some herbaria as C. grandifolia (Schlecht. & Cham.) Schau. On the other hand, the Molina R. 20562 & 22950, distributed as C. lilacina, actually are C. grandifolia, while Molina R. 14377, 14436, 14437, & 22462 are C. lilacina var. velutina Moldenke.

Additional citations: GUATEMALA: Escuintla: Cox 935 [Herb. Cox 981] (Oa). HONDURAS: Cortés: J. D. Dickson 1316 (W-2700696). Morazán: Molina R. 83 (Ba).

CORNUTIA LILACINA var. **VELUTINA** Moldenke in Fedde, Repert. Spec. Nov. 40: 183. 1936.

Additional bibliography: Moldenke, Phytologia 14: 425-426. 1967; Gibson, Fieldiana Bot. 24 (9): 196. 1970; Moldenke, Fifth Summ. 1: 79, 83, & 84 (1971) and 2: 876. 1971; Moldenke, Phytologia 31: 378 (1975) and 32: 237. 1975.

Recent collectors describe this plant as a small, weak, pubescent tree, 3-5 m. tall, or a large, tall shrub, 2-3 m. tall, with large woolly leaves that are fragrant when bruised, and flowers in terminal panicles, also fragrant when bruised, showy over a long period during the summer. They have encountered it in mixed woods and in open weedy meadows and roadsides, at altitudes of 620-1300 meters, flowering from June to August. Molina R. reports it as "frequent", "common in cutover pine forests", and "common in secondary forests" in Honduras. Pfeifer refers to it on the label of his collection as a "vine to 30 ft.", but surely this must be the result of a secretarial error in transcription!

The corollas are said to have been "blue" on Pfeifer 1460 & 1729, "lilac" on Molina R. 14366, 14436, & 14437, "violet" on Molina R. 22462, Pancho 1604, and R. W. Read 1260, and "lavender-blue" on Gillis 8464.

Read reports that this plant grows well in dry limestone soils. Gibson (1970) reduces it to the synonymy of C. pyramidata L.

Material has been misidentified and distributed in some herbaria as C. grandifolia (Schlecht. & Cham.) Schau., C. lilacina Moldenke, and C. pyramidata L.

Additional citations: HONDURAS: Comayagua: Molina R. 14366 (N). Copán: Molina R. 26232 (N). Distrito Central: Pfeifer 1729 (W). El Paraíso: Pfeifer 1460 (W). Lampira: Molina R. 12981 (N). Morazán: Molina R. 14436 (N), 14437 (W-2567913, W-2568513).

Ocotepeque: Molina R. 22462 (N). Tegucigalpa: Barkley & Boghdan 39400 (Z). CULTIVATED: Florida: Gillis 8464 (Ac, Ba, Ft); Pancho 1604 (Fa); R. W. Read 1260 (Ba--Ft--2196).

CORNUTIA MICROCALYCINA Pavon & Moldenke ex Moldenke in Fedde, Repert. Spec. Nov. 40: 173-175. 1936.

Additional synonymy: Cornutia microcalycina Pav. ex Moldenke apud J. F. Macbr., Field Mus. Publ. Bot. 13 (5): 690. 1960. Cornutia microcalycyna Pav. & Moldenke apud Acosta-Solis, Divis. Fitogeogr. Ecuad. 63, sphalm. 1968. Cornutia microcalycina Moldenke, Fifth Summ. 1: 470, in syn. 1971. Cornutia microcalycina (Pav.) Moldenke, Fifth Summ. 1: 470, in syn. 1971.

Additional bibliography: J. F. Macbr., Field Mus. Publ. Bot. 13 (15): 690. 1960; Fosberg & Klaue in Bowman, Galáp. 188. 1966; Moldenke, Phytologia 14: 426-428. 1967; Moldenke, Résumé Suppl. 15: 20 (1967), 16: 4 (1968), and 17: 8. 1968; Acosta-Solis, Divis. Fitogeogr. Ecuad. 63. 1968; Moldenke, Fifth Summ. 1: 89, 90, 116, 122, 135, 140, 469, & 470 (1971) and 2: 530 & 876. 1971; Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 129-130 & 145. 1973; Lasser, Braun, & Steyermark, Act. Bot. Venez. 9: 36. 1974; Moldenke, Phytologia 28: 435 & 449 (1974) and 32: 240. 1975; López-Palacios, Revist. Fac. Farm. Univ. Los Andes 15: 24. 1975.

Recent collectors describe this plant as a shrub, 4 m. tall, or tree, 6-7 m. tall, the leaves "membranous" or "thick-papery", soft, dull pale-green or medium-green above and paler beneath, lightly tomentose on the venation beneath, the calyx pale-green, and the fruit subglobose-ovoid, pale-green when young, glossy and purple or black when mature. López-Palacios describes it as an "Árbol ca. 6 m. de olor viroso. Hojas de envés tomentoso-velutinoso" and found it to be "Abundante en la zona desde el nivel del mar hasta 1400 m." Others speak of encountering it in open fields and in secondary regrowth at altitudes of 150-580 meters, flowering from May to August, and fruiting from July to September.

The corollas are said to have been "purple" on Breteler 4023 and Curran 160, "blue-purple" on López-Palacios & Bautista 3169, "blue" on Aristeguieta 3255 and López-Palacios 3090, and "purple-lilac" on Stern & al. 471. Stern and his associates speak of it as a "vine on tree", but this is probably an error in observation. A wood sample accompanies Breteler 4023. The vernacular name, "anime de pierra caliente", has been recorded for the plant. Lasser and his associates (1974) speak of it as being cultivated in Venezuela. Acosta-Solis (1968) cites his no. 5211 from Ecuador.

The Castafienda 5565 and Gilmartin 597, distributed as typical C. microcalycina, are actually var. pulverulenta Moldenke.

Additional citations: PANAMA: Darién: Stern, Chambers, Dwyer, & Ebinger 471 (E-1757554). COLOMBIA: Bolívar: Curran 160 (Ws).

VENEZUELA: Barinas: Aristeguieta 3255 (N); Breteler 4023 (N, N, W-2466002, W-2466003), 4605 (W-2582964A); López-Palacios 3090 (Ld). Mérida: López-Palacios & Bautista 3169 (Ld), 3406 (Ld).

CORNUTIA MICROCALYCINA var. ANOMALA Moldenke in Fedde, Repert. Spec. Nov. 40: 176. 1936.

Additional bibliography: Moldenke, Phytologia 14: 426. 1967; Moldenke, Fifth Summ. 1: 89, 90, & 116 (1971) and 2: 876. 1971; Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 130 & 145. 1973.

Emended citations: PANAMA: Darién: Goldman 1896 (W-716154).

CORNUTIA MICROCALYCINA var. PULVERULENTA Moldenke in Fedde, Repert. Spec. Nov. 40: 175-176. 1936.

Additional bibliography: Moldenke, Phytologia 14: 426-428. 1967; Moldenke, Fifth Summ. 1: 90, 116, 135, & 169 (1971) and 2: 876. 1971; Moldenke in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 130 & 145. 1973; Moldenke, Phytologia 28: 435 (1974) and 32: 240. 1975.

Recent collectors describe this plant as a bush, 3 m. tall, a half-shrub, or a shrub, 2.5-7 m. tall, or even a small tree, 4-9 m. tall, odorous and very medullose, the trunk to 15 cm. in diameter at breast height, the bark gray and with fine fissures, and the fruit blue or purple. They have encountered it on river-banks, in secondary forests, or in very advanced secondary rain-forests, at altitudes of 50-980 meters, flowering in January, February, April, and from July to September, and fruiting in February and from July to September. Játiva & Epling refer to it as "common" and as "common in clearings". Duke reports that it is one of the medicinal plants of the Bayano Cuna Amerinds, while Castafieda says that it is used "para ahuyentar los piojos en nidos de gallinas".

Vernacular names recorded for it are "culapo", "malasap", "nacedero", and "samula". The corollas are said to have been "blue" on Játiva & Epling 2103 & 2149 and López-Palacios 3587, "violet" on Játiva & Epling 470 & 749, "lilac" on Castafieda 5565, and "purple" on Barclay & al. 3159, Lewis & al. 5502, and Little & Dixon 21051.

Material has been misidentified and distributed in some herbaria as C. grandifolia var. normalis (Kuntze) Moldenke, C. microcalycina Pac. & Moldenke, and C. odorata var. colombiana Moldenke.

Additional citations: PANAMA: Coclé: Lewis, Porter, Duke, & Baker 5502 (Z). Darién: J. A. Duke 14454 (E-190843). COLOMBIA: Antioquia: López-Palacios 3587 (Ld) Meta: Barclay, Juájiboy, & Gama 3159 (W-2702290). Nariño: Castafieda 5565 (N). ECUADOR: Esmeraldas: Játiva & Epling 470 (N), 749 (N, N, W-2707200), 2103 (N, S, W-2600856), 2149 (E-2165237, N, S, W-2600843); A. J. Gilmartin 597 (N); Little & Dixon 21051 (N, W-2644741). [to be continued]